

IN THE TITLE

--METHOD FOR DEPOSITING A DIELECTRIC MATERIAL ON COPPER--

IN THE SPECIFICATION

--Please delete the Abstract at page 14, lines 1-21, in its entirety and replace the same with the substitute Abstract attached hereto.--

IN THE CLAIMS

Please amend the claims as follows.

--19. (Amended) A method for depositing a dielectric material on copper on the surface of a structure, entailing the following steps:

placing the structure in a deposit chamber of chemical vapor deposition or plasma assisted chemical vapor deposition,

adding to the chamber a first gas forming a precursor for the formation of the dielectric material and containing an element able to contaminate copper,

adding to the chamber a second gas containing a chemical element intended, together with the element contained in the first gas and able to contaminate copper, to form said dielectric material, the second gas being able to react with the first gas to give a deposit of dielectric material,

performing the deposit of dielectric material from the first gas and the second gas, the method also comprising a step for adding a third gas able to prevent the contamination of copper by said element contained in the first gas in which the third gas comprises at least one member selected from the group consisting of oxygen, nitrogen, and carbon and the third gas is present during the adding of the first and second gases.

23. (Amended) The method according to claim 19, in which the second gas is
B2 nitrogen.

24. (cancelled)

B3 25. (Amended) The method according to claim 24, in which the third gas is at least one member selected from the group consisting of N_xO_y , C_xH_y , xN_2+yH_2 mixture, and xO_2+yN_2 mixture.

26. (Amended) The method according to claim 24, in which the third gas is at least one member selected from the group of NH_3 , N_2O , CH_4 and C_2H_6 .

27. (Amended) The method according to claim 19, in which the first, second and third gases are also added before lighting of the plasma, the flow rates of the first, second and third gases, the energy required for depositing and the time of formation of the deposit being adjusted in relation to the desired thickness of the dielectric material.

28. (Amended) The method according to claim 20, in which the steps are conducted in the following order:

placing the structure in the deposit chamber,

adding the third gas to the deposit chamber, the third gas being chosen to reduce oxides present on the surface of the copper in which the third gas comprises at least one member selected from the group consisting of oxygen, nitrogen, and carbon and the third gas is present during the adding of the first and second gases,

lighting a plasma of third gas in the deposit chamber in order to reduce said oxides,

adding the first and second gases to the deposit chamber, adjustment of the flow rates of the first, second and third gases, of the energy required for the deposit and the formation time of the deposit in relation to the desired thickness of the dielectric material and its desired physical properties.

29. (Amended) The method according to claim 28, in which the third gas further comprises ammonia.

30. (Amended) The method according to claim 19, in which for the purpose of obtaining a dielectric material in SiN, the first gas is silane, said chemical element of the second gas is nitrogen and the third gas further comprises ammonia.

32. (Amended) A method for depositing a dielectric material on copper on the surface of a structure, entailing the following steps:

placing the structure in a deposit chamber of chemical vapor deposition or plasma assisted chemical vapor deposition,

adding to the chamber a gas forming a precursor for the formation of the dielectric material and containing a first element able to contaminate copper and a second element able to combine with the first element to give the dielectric material,

making the deposit of dielectric material by combining the first element and the second element,

the method also comprising a step for adding an additional gas able to prevent the contamination of the copper by said element contained in the precursor gas in which the additional gas comprises at least one member selected from the group consisting of oxygen,